

REMARKS

Status of the Claims

Claims 1-13, 16-29 and 32-63 are currently pending in the case.

Rejection of the Pending Claims

The Office Action has rejected the pending claims under §102 and §103 as obvious over U.S. Patent Application Publication No. 2002/0013133 A1 (Lam) in view of US 5,977,913 (Christ). Applicant traverses these rejections.

The pending claims require synchronization circuitry and synchronizing method steps such that antenna receive data and transmit data is synchronously timed “wherein the output clock rate matches the clock signal controlling” the ADC or DAC for the receive circuitry and transmit circuitry, respectively. In addition, delay times for these antenna elements are controlled through the timing of the operational rate for the ADCs and DACs within this receive circuitry and transmit circuitry, respectively, rather by then inserting a programmable delay element within the signal path. In short, these combinations of elements required by the independent claims are not taught or suggested by Lam and Christ, whether considered alone or in combination.

The Final Office Action relied upon Lam as providing the synchronization feature. The current Office Action now relies upon Lam as showing the receive circuitry, transmit circuitry and delay timing limitations while agreeing that Lam does not teach the synchronization limitations. Instead, the Office Action relies upon Christ as teaching the synchronization limitations.

Initially, it is noted that paragraphs 0080-0085 of Lam do not teach ADCs or DACs that introduce delays through the operational rate for the ADCs and DACs. Rather, as shown in FIG. 9 (and also in FIG. 3) of Christ, a delay element 904 (or 304 in FIG. 3) is added within the signal path to achieve a desired delay in the signal path. This placing of a programmable delay element within the RF signal path is what is described as the prior art in the Background of the present Application. The pending claims require that the operational rate of the ADC/DAC be adjusted to provide the programmable delay thereby providing a delay adjustment mechanism that is not within the signal path..



Looking to Christ, in contrast to the digitally programmable phased array antennas to which the claimed inventions are directed, Christ is directed to a time-of-arrival (TOA) based system for identifying persons within a building. The portion of Christ relied upon by the Office Action (Christ, column 6, lines 21-24) discusses the use of synchronized clocks to provide the time stamps for the different receivers within the TOA-based system. Christ is using concerned about synchronizing the TOA clocks because the "TOA receiver arrays must be synchronized to perform relative time-of-arrival measurements." [Christ, col. 6, lns. 21-22.] Thus, Christ is not addressing the need to synchronize data passing through a receive or transmit path and does not teach or suggest synchronization "wherein the output clock rate matches the clock signal controlling" the ADC or DAC.

Applicant respectfully asserts, therefore, that Lam and Christ, whether considered alone or in combination, do not teach or suggest the limitations of the pending claims. Withdrawal of the pending rejections is respectfully requested.

Conclusion

In view of the foregoing, it is respectfully submitted that pending claims are in condition for allowance. Accordingly, favorable reconsideration and Notice of Allowance are respectfully requested.

The Examiner is invited to contact the undersigned at the phone number indicated below with any questions or comments or to otherwise facilitate expeditious and compact prosecution of the application.

Respectfully submitted,

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